

App. No. 10/654,343
Office Action Dated May 10, 2006

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REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks. Claim 15 is hereby amended. Amendment of claim 15 is supported by page 1, lines 7-8.

Applicants appreciate the courtesy extended by the Examiner to Applicants' representatives, Douglas P. Mueller and Margaret F. Emerson, during the telephonic interview on July 27, 2006. During the interview, claim 15 and Somaki (US 5,641,113) were discussed. Agreement regarding the allowability of the claims was not reached, although tentative agreement to reconsider claim 15 in view of the above Amendment was reached. The Examiner indicated that the current revision to claim 15 would be entered.

Claims 15, 25-27, 33, and 34 were rejected as being unpatentable over Somaki (US 5,641,113) in view of Chen (US 6,260,264). Applicants traverse this rejection. The combination of Somaki and Chen does not teach a method for manufacturing an electric element built-in module including the step of flip-chip mounting at least one electric element that is a semiconductor chip, one of whose surface is provided with a functional portion and a connection electrode, on a wiring pattern so that the one surface faces the wiring pattern, as required by claim 15. Claim 15 requires that prior to mounting, the electric element includes a connection electrode. In contrast, Somaki teaches that when solder bumps (13b, the rejection equates to the claimed electric element) are mounted, the solder bumps (13b) do not include other solder bumps (13a, rejection equates to the claimed connection electrode). See Figures 2D and 2E. The method taught by Somaki includes mounting a solder bump (13a) on an external electrode (12, rejection equates to the claimed wiring pattern). See Figure 2B. Subsequently, a solder bump (13b) is mounted on solder bump (13a). See Figure 2E. Then the combination of solder bumps (13a, 13b) is sealed with resin (34). See Figure 4B.

Even if one considered the package (11) taught by Somaki to be equivalent to the claimed electric element, the solder bump (13b) equivalent to the claimed connection electrode, and contact pad (22) equivalent to the claimed wiring pattern, the reference does not meet the

App. No. 10/654,343
Office Action Dated May 10, 2006

grinding or abrading requirements of claim 15. Claim 15 requires that the electric element (semiconductor chip) and the thermosetting resin composition is ground or abraded from a side of a surface of the electric element opposite to that provided with the connection electrode. In contrast, Somaki teaches that tips of a plurality of solder bumps (13b) formed on the package (11) are ground to achieve equal heights, followed by the package (11) being mounted on the contact pad (22). See Figures 4A-4D and 5. Therefore, Somaki teaches grinding or abrading on an opposite side to that required by claim 15. Similarly, Chen teaches that bumps (24) formed on a chip (20) are ground to achieve equal heights, followed by mounting the chip (20) on circuit pads (38). See Figures 1A-1C and 2A.

Favorable reconsideration of claims 15, 25-27, 33, and 34 is requested.

Claims 20-23 and 35 were rejected as being unpatentable over Somaki, in view of Chen, and further in view of Janssen (US 3,634,168). Applicants traverse this rejection. Claims 20-23 and 35 should be considered allowable for at least the same reasons as claim 15, from which they depend. Janssen does not remedy the deficiencies of Somaki and Chen, as previously noted. Applicants are not conceding the correctness of the rejection as applied to the rejected claims.
Favorable reconsideration of claims 20-23 and 35 is requested.

Claim 24 was rejected as being unpatentable over Somaki, in view of Chen, and further in view of Saito (US 4,913,697). Applicants traverse this rejection. Claim 24 should be considered allowable for at least the same reasons as claim 15, from which it depends. Saito does not remedy the deficiencies of Somaki and Chen, as previously noted. Applicants are not conceding the correctness of the rejection as applied to the rejected claim. Favorable reconsideration of claim 24 is requested.

Claim 28 was rejected as being unpatentable over Somaki, in view of Chen, and further in view of "Official Notice". Applicants traverse this rejection. Claim 28 should be considered allowable for at least the same reasons as claim 15, from which it depends. The subject matter taken by "Official Notice", even assuming arguendo its availability as prior art, does not remedy

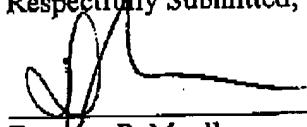
App. No. 10/654,343
Office Action Dated May 10, 2006

the deficiencies of Somaki and Chen, as previously noted. Applicants are not conceding the correctness of the rejection as applied to the rejected claim. Favorable reconsideration of claim 28 is requested.

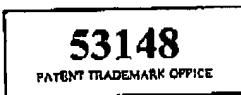
App. No. 10/654,343
Office Action Dated May 10, 2006

In view of the above, favorable reconsideration in the form of a notice of allowance is requested. Any questions regarding this communication can be directed to the undersigned attorney, Douglas P. Mueller, Reg. No. 30,300, at (612)455-3804.

Respectfully Submitted,


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